



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,748	02/15/2007	Robert Henri-Marcel Stouffs	19790-008US1 CER03-0015	8191
26191 7590 11/22/2010 FISH & RICHARDSON P.C. (TC) PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER GWARTNEY, ELIZABETH A	
			ART UNIT 1781	PAPER NUMBER
			NOTIFICATION DATE 11/22/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/576,748	Applicant(s) STOUFFS ET AL.	
	Examiner ELIZABETH GWARTNEY	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14, 16-18, 20-24, 26-30 and 32-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 16-18, 20-24, 26-30 and 32-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20101102</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1 November 2010 has been entered.
2. Claims 25 and 31 have been cancelled. Claims 14, 16-18, 20-24, 26-30 and 32-37 are pending.

Claim Objections

3. Claim 24 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Here, claim 24 requires "wherein the content of maltitol in the solidified maltitol of step c) is from about 90% w/w to about 99.5% w/w based on dry substance," however, claim 14 from which claim 24 depends already recites the limitation "wherein the content of maltitol in the solidified maltitol is from about 92% w/w to about 97% w/w based on dry substance."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

Art Unit: 1781

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 27-30 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

While there is support in Applicants' specification for reciting "recycling a part or all of said solidified maltitol into step a) until the solidified maltitol obtained in step f) has a maltitol content of from about 95% to about 98%, from about 95% to about 97% or from about 95.5% to about 96.5% (p. 4/L7-10), there is no support for reciting a maltitol content of from about **85% to about 97%**.

7. Claims 27-30 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 27, the recitation " recycling a part or all of said solidified maltitol into step a) until the solidified maltitol obtained in step f) has a maltitol content of from about 95% to about 98%, wherein step g) is repeated until the solidified maltitol obtained in step f) has a maltitol content of from about 85% to about 98%" renders the claim indefinite. It is unclear how

Art Unit: 1781

the step of recycling solidified maltitol into step a) until obtaining the recited maltitol content differs from repeating step g).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1781

11. Claims 14, 16-18, 20-24, 26-30 and 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al. (US 6,458,401).

Regarding claims 14, 16-17, 20 and 33 and Beauregard et al. disclose a process for preparing powder containing crystalline particles of maltitol comprising the steps of:

(a) continuously mixing maltitol syrup having a dry matter content of at least 70% by weight and a maltitol content of at least 85% by weight on a dry matter basis, the mixing being effected by simultaneously dispersing the maltitol syrup and maltitol containing seeds into an open rotating bed containing maltitol based granules (C2/L35-45);

(b) drying the granulated product obtained in a fluidized bed to achieve a residual moisture content of *not more than* 2% (C3/L47-48);

(c) grinding the granules to the required particle size and then sorting the particles by sifting (C3/L49-51); and

(d) recycling the particles eliminated by sifting to the granulator for use as maltitol containing seeds in step (a) (C3/L49-52).

Given Beauregard et al. disclose a process for preparing crystalline maltitol with maltitol granules and maltitol syrup substantially similar to that presently claimed, it is clear that intrinsically the content of maltitol in the resulting crystalline maltitol would be from about 92% w/w to about 97% w/w based on dry substance.

Beauregard et al. disclose that the maltitol syrup and seed material are introduced into the granulator to achieve a seed/syrup weight ratio of 4 parts seed to 1 part maltitol syrup (C4/L47-51).

Art Unit: 1781

Regarding claim 18, Beauregard et al. disclose all of the claim limitations as set forth above and that the matured granules are submitted to a rough grinding and dried in a fluidized bed using air at about 90°C (C4/L65-67).

Regarding claims 21-23, Beauregard et al. disclose all of the claim limitations as set forth above. Beauregard et al. also disclose that that the temperature of the maltitol syrup is 80°C (C3/L20-21).

Regarding claims 24 and 26, Beauregard et al. disclose all of the claim limitations as set forth above. Given Beauregard et al. disclose a process for preparing maltitol substantially similar to that presently claimed, it is clear that the powder containing crystalline particles of maltitol would intrinsically have maltitol content from about 90% w/w to about 99.5%.

Regarding claims 27- 30 and 32, Beauregard et al. disclose a process for preparing powder containing crystalline particles of maltitol comprising the steps of:

(a) loading powder containing crystalline maltitol, i.e. seed material, into an open rotating bed (C3/L16-28);

(b) adding maltitol syrup into the open bed, wherein said maltitol syrup has a dry substance content of about 70% (C3/L16-28);

(c) spraying said maltitol syrup into the open bed to coat said seed material, wherein the maltitol syrup is sprayed onto the maltitol seed material using an air atomizing nozzle at a temperature of at least 80°C (C2/L54-57, C3/L16-28);

(d) drying said coated seed material in a fluidized bed to achieve a residual moisture content of *not more than* 2% (C3/L16-50);

Art Unit: 1781

(e) grinding the granules to the required particle size and then sorting the particles by sifting (C3/L49-51); and

(d) recycling the particles eliminated by sifting to the granulator for use as maltitol containing seeds (C3/L49-52).

Given Beauregard et al. disclose a process for preparing crystalline maltitol with maltitol syrup and maltitol particles substantially similar to that presently claimed, intrinsically the resulting crystalline maltitol would have a maltitol content of from about 95.5% to about 96.5%.

Regarding claims 34-37, Beauregard et al. disclose all of the claim limitations as set forth above. Beauregard et al. also disclose sugar free shortbread cookies and oatmeal cookies comprising flour, shortening, sorbitol and 18% by weight maltitol (C5/Example 2) and a tablet comprising 99% maltitol (C4/L11-16).

Response to Arguments

12. Applicant's arguments filed 1 November 2010 have been fully considered but they are not persuasive.

Applicants explain that claim 14 has been amended to clarify that the first two steps are performed in a fluid bed. Applicants submit that "Beauregard et al. explicitly discloses using an open rotating receptacle to mix the maltitol syrup and maltitol seed (see, for example, the Abstract) which corresponds to Applicants' claimed step a) which requires that the mixing occur in a fluid bed."

In this case, it is the Examiner's position that the open rotating receptacle of Beauregard et al., wherein an air atomizing nozzle is used to spray an aqueous syrup onto the rotating bed, is

Art Unit: 1781

equivalent to the fluid bed required in the present claim 14. Given Beauregard et al. disclose an open bed wherein air is used to disperse maltitol syrup onto maltitol seed material, it is clear that the mixing process takes place in a fluid bed.

Applicants note that “the claimed process is not aimed at getting a highly purified solidified maltitol such as crystalline maltitol.” Applicants submit that “it was surprisingly found that, even with a lower content of maltitol, it is still feasible to obtain a solidified maltitol using the claimed method.

Given Applicants claim a process wherein the content of maltitol in the resulting solidified maltitol is from about 92% to about 97% w/w based on dry substance, it unclear what is encompassed by a highly purified solidified maltitol or what the “lower content” of maltitol is measured against. In this case, given Beauregard et al. disclose a process using maltitol syrup and maltitol particles substantially similar to that presently claimed, intrinsically the resulting maltitol product would have a maltitol content as claimed. Further, while Beauregard et al. disclose a maltitol powder containing crystalline particles of maltitol, Beauregard et al. does not disclose that the crystalline maltitol is “highly purified.” Rather, it is the Examiner's position that crystalline polyols may be made is less than highly purified forms.

Applicants submit that process of Beauregard et al. does not results in solidified maltitol rather, crystalline maltitol.

Here, it is the Examiner's position that crystalline maltitol *is* a type of solidified maltitol. Further, in Example 1 (C4/L52-55), Beauregard et al. refers to the crystalline particles of maltitol as the “solidified product.”

Art Unit: 1781

Applicants explain the differences between the prior art and the current invention.

Applicants find that by “turbulating the maltitol powder and the maltitol syrup in the fluid bed in the presence of gas ensures that there is good surface contact between each of the particles of maltitol powder and the maltitol syrup.” Further, Applicants explain that “a droplet of liquid that falls on a powder particle instantaneously solidifies the powdered maltitol and liberate” water, which is transported away by the gas.” Finally, Applicants explain that “the gas in the pending claims not only disperses the powder particles for coating, granulating, and/or agglomerating, but also simultaneously dries the product. . .[and] obviates the need for an expensive spray-drying step.”

While it is not disputed that the steps of the present invention provide good surface contact between each of the particles of maltitol powder and the maltitol syrup, that the combination of liquid maltitol and powder provide for instant solidification and the liberation of water, and that the gas simultaneously dries the product, however, the claims are not limited by these results. While Beauregard et al. may include additional steps, there is nothing in the claims that limit further processing. Further, given Beauregard et al. disclose a process substantially similar to that presently claimed, absent evidence to the contrary in the record, one would expect the same results.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH GWARTNEY whose telephone number is (571)270-3874. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1781

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ELIZABETH GWARTNEY/
Examiner, Art Unit 1781